

University Reactor Fuel Assistance and Support

June 2001

To meet our commitment to help U.S. university and colleges stay at the forefront of science education and research, the Office of Nuclear Energy, Science and Technology University Program assists universities in the operation of research reactors and in the performance of other educational activities. Direct support is provided to 43 educational institutions in 28 states. The program includes the following elements:

Reactor Fuel Assistance. The Department provides fresh fuel to, and takes back spent fuel from, university research reactors. There are currently 28 operating university research reactors at 27 institutions in the United States. These reactors are some of our greatest resources in the effort to improve technical education, and are used for a variety of research, educational and training purposes.

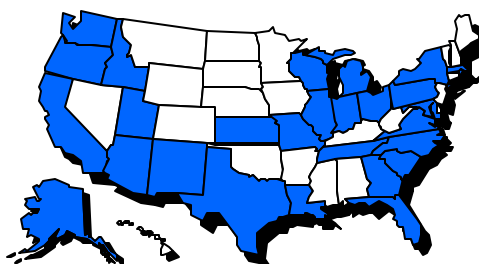
Nuclear Engineering Education Research (NEER) Grants. The Department re-established, in FY 1998, a competitive peer-reviewed program to provide grants allowing nuclear engineering faculty and students to conduct innovative research in nuclear engineering and related areas. The awards run from one to three years and are granted in eight separate technical areas related to nuclear engineering: reactor physics, reactor engineering, reactor materials, radiological engineering, radioactive waste management, applied radiation science, nuclear safety and risk analysis, and innovative technologies for next generation reactors, space power and propulsion, or radiation sources. This type of research is vital to the

academic community to help promote excellence in nuclear engineering and provide resolution to issues confronting nuclear engineering in general. In its first three years this program has awarded 52 grants

DOE/Industry Matching Grants. The Department of Energy and participating companies provide matching funds, up to \$60,000 from each side, to universities for use in funding scholarships, improving nuclear engineering and science curricula, and modernizing experimental and instructional facilities. Typically 20-25 receive universities funding each year.

Nuclear Engineering/Health Physics Fellowships and Scholarships, and Minority Fellowships and Scholarships. The Department provides tuition, stipends, and practicums to outstanding graduate students studying nuclear engineering and health physics and undergraduate scholarships and practicums to students pursuing a nuclear engineering course of study to ensure that our country will have an adequate supply of trained nuclear scientists and engineers. Beginning in FY 2000, the Department revised its fellowship and scholarship programs for minorities by pairing minority institutions with institutions offering a nuclear engineering degree to enable more minorities to enter the field of nuclear engineering.

States
With
Participating
Universities



Program Participants

Clemson University
Cornell University
Georgia Institute of Technology
Howard University*
Idaho State University
Jackson State University*
Kansas State University
Lincoln University*
Luna Vocational Technical Institute
Massachusetts Institute of Technology
Morgan State University*
New Mexico State University

North Carolina State University
North Carolina A&T State University*
North Carolina Central University*
Ohio State University
Oregon State University
Pennsylvania State University
Prairie View A&M University*
Purdue University
Reed College
Rensselaer Polytechnic Institute
Rhode Island Nuclear Science Center
South Carolina State University*

Tennessee State University*
Texas A&M University
University of Alaska-Anchorage
University of Arizona
University of California-Berkeley
University of Cincinnati
University of Florida
University of Illinois
University of Maryland
University of Massachusetts-Lowell
University of Michigan
University of Missouri-Columbia

University of Missouri-Rolla
University of New Mexico
University of Tennessee
University of Texas
University of Utah
University of Virginia
University of Wisconsin
Virginia State University*
Washington State University
Worcester Polytechnic Institute
Xavier University of Louisiana*

*U.S. Historically Black Colleges and Universities

Reactor Sharing. Through this assistance effort, the Department enables universities with reactors to “share” them with students and faculty at other institutions who lack such a facility. The reactors are made available for use in research, experiments, training, and for facility tours and other educational activities.

Reactor Upgrades. The Department is providing assistance to universities to improve the operational and experimental capabilities of their research reactors. Grants are provided to the universities to purchase equipment and services necessary to upgrade the reactor facilities, such as reactor instrumentation and control equipment, data recording devices, radiation, security and air monitoring equipment, and gamma spectroscopy hardware and software. Each year 20-25 reactors receive assistance.

Radiochemistry. The Department awards grants in the field of radiochemistry to enhance the viability of radiochemistry education in the United States. Radiochemistry is linked to several national priorities including medicine, energy and national defense.

Nuclear Engineering and Science Education Recruitment Program. This program is designed to increase the number of university students entering a nuclear engineering course of study by developing a core curriculum to instruct science teachers in nuclear science and engineering topics.

FY 2001 Planned Accomplishments:

- Provide fresh fuel to and ship spent fuel from all university research reactors requiring these services.
- Award approximately 18 new NEER grants, bringing the total of existing and new grants to about 50.
- Award 22-24 fellowships to outstanding nuclear engineering M.S. and Ph.D. students.
- Fund upgrades and improvements at 23 research reactors.
- Continue reactor sharing with up to 29 institutions having university research reactors.
- Award approximately 50 scholarships to outstanding undergraduates at majority and minority institutions pursuing a nuclear engineering degree.
- Partner with industry to provide over 20 matching grant awards.

Program Budget University Reactor Fuel Assistance and Support (in millions)		
FY 1999 <u>Appropriation</u>	FY 2000 <u>Appropriation</u>	FY 2001 <u>Appropriation</u>
\$11.0	\$12.0	\$12.0

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